

WHAT IS CLAIMED IS:

1. An image processing device for performing image processing on image data, the image processing device comprising:
  - a statistical value calculating device that performs statistical processing on the image data to generate statistical value data representing statistical values;
  - a scene detecting device that detects whether a change occurs in a scene based on the image data;
  - a correction parameter calculating device that weights the statistical value data of a plurality of frames in accordance with the detection result by the scene detecting device to calculate a correction parameter; and
  - an image correcting device that performs image correction processing on the image data based on the correction parameter.
2. The image processing device according to Claim 1, wherein, when it is detected by the scene detecting device that a change occurs in the scene, the correction parameter calculating device generates a correction parameter by performing calculations in which the weighting on statistical value data of a previous frame is smaller than in a case where no change occurs in the scene.
3. The image processing device according to Claim 1, wherein, when it is detected by the scene detecting device that no change occurs in the scene, the correction parameter calculating device calculates an average of statistical value data of the plurality of frames to generate the correction parameter.
4. The image processing device according to Claim 3, wherein, when it is detected by the scene detecting device that a change occurs in the scene, the correction parameter calculating device generates statistical value data of the current frame as the correction parameter.
5. The image processing device according to Claim 1, wherein, when it is detected by the scene detecting device that no change occurs in the scene, the correction parameter calculating device calculates a correction parameter  $P(n)$  of the current frame in accordance with the equations:  $P(n) = A * S(n) + B * P(n-1)$  and  $1 = A + B$ , where  $S(n)$  is statistical value data of the current frame,  $P(n-1)$  is a correction parameter of the frame prior to the current frame by one frame,  $A$  is a first coefficient, and  $B$  is a second coefficient.
6. The image processing device according to Claim 5, wherein, when it is detected by the scene detecting device that a change occurs in the scene, the correction parameter calculating device makes  $A$  equal to 1 and  $B$  equal to 0.

7. The image processing device according to Claim 1, the correction parameter calculating device detecting a frame rate of the image data and weighting the statistical value data of the plurality of frames based on the detected frame rate and the detection result by the scene detecting device to calculate a correction parameter.

8. An image processing method of performing image processing on image data, the method comprising:

- performing statistical processing on the image data to generate statistical value data representing statistical values;

- detecting whether a change occurs in a scene based on the image data;

- calculating a correction parameter by weighting the statistical value data of a plurality of frames in accordance with the result of detecting scenes; and

- performing image correction processing on the image data based on the correction parameter.

9. The image processing method according to Claim 8, calculating the correction parameter further comprising, when it is detected that a change occurs in the scene, generating the correction parameter by performing calculations in which the weighting on statistical value data of a previous frame is smaller than in a case where no change occurs in the scene.

10. An image processing program for performing image processing on image data that instructs a computer to:

- perform statistical processing on the image data to generate statistical value data representing statistical values;

- detect whether a change occurs in a scene based on the image data;

- weight the statistical value data of a plurality of frames based on the detection result to calculate a correction parameter; and

- perform image correction processing on the image data based on the correction parameter.